



Interim Forest Management Plan Upper Neenah Creek Fishery Area and Adams County Remnant Fishery Areas

Property Identifiers

Property Names: Upper Neenah Creek Fishery Area (UNC)
Adams County Remnant Fishery Areas (ACR)

Property Designation: Fishery Areas

DNR Property Codes: (UNC) 0108
(ACR) 0106

Property Location: Adams County

Property Acreage: UNC 361
ACR 376

Master Plan Date: 1985 – Not an NR44 compliant master plan

Property Assessment

A. Ecological Landscape description and property context:

Upper Neenah Creek is located in the Central Sand Hills Ecological Landscape. This landscape is located in central Wisconsin at the eastern edge of the former Glacial Lake Wisconsin. Glacial moraines that were later partially covered by glacial outwash are the major landforms found in this landscape. Historical upland vegetation consisted of oak forest, oak savanna, and tallgrass prairie. Fens were common here and were found along with wet-mesic prairie, wet prairie, and rare coastal plain marshes. Currently, the area contains a mixture of farmland, woodland, wetlands, small kettle type lakes, and coldwater streams. Soils are predominantly sand.

Adams County Remnant Fishery Areas are located in the Central Sand Plains Ecological Landscape. This landscape is located in central Wisconsin, around a relatively level, sandy, glacial lake plain. This ecological landscape formed in and around the former Glacial Lake Wisconsin. Soils are primarily sands, however, organic soils are common in the extensive poorly drained peatlands found predominantly west of the Wisconsin River. Widespread wetland drainage occurred in the eastern part of the ecological landscape as well, and these lands are now used mostly for agricultural purposes, including the production of corn, soybeans, potatoes, small grains, and vegetables and as pastureland. The historical vegetation of this landscape included some of Wisconsin's most extensive wetlands. On the uplands there were large areas of pine and oak forests. Some areas were vegetated with pine barrens, oak barrens, and sand prairie due to a frequent fire history.



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B. General property description

Upper Neenah Creek Fishery Area

Neenah Creek is one the finest trout streams in central Wisconsin. The stream meanders southeasterly through marshes, woods and agricultural lands and provides excellent habitat for a tremendous diversity of plants and animals. The headwaters of Neenah Creek are formed by the outlet structure of McGinnis Lake. The stream flows 42.8 miles through Adams, Marquette and Columbia Counties before joining with the Fox River on its way to Lake Michigan.

In 1957, the State of Wisconsin, through the authority of the Wisconsin Conservation Department under Chapter 23.09 of the Wisconsin Statutes and with federal aid from the Fish and Wildlife Restoration Acts, initiated a land acquisition program. The primary purpose was to insure public access to the waterway and provide land for outdoor recreational opportunities. On October 9, 1970 the Natural Resources Board approved the Neenah Creek Fishery Area project boundary with a goal of purchasing 805.7 acres.

Fisheries Management of this area has consisted of trout habitat improvement projects and, fish surveys. Trout habitat improvement projects occurred in 1982 (brushing) 1983 (brushing), 1984 (brushing), 1993 (in-stream habitat work), 2012-2014 (in-stream habitat work). The purpose of brushing is to improve fishability and allow sunlight to penetrate the stream to increase production. The purpose of the in-stream habitat work was to provide a wider diversity of habitat and cover with the creation of undercut banks with overhead structure, pools, riffles and addition of logs and boulders. Annual trout surveys have taken place since 2007 at a 1250-foot trend site. Adult brown trout relative abundance has ranged from 439 fish per mile to 882 fish per mile with an average of 634 fish per mile. The brown trout population has strong natural reproduction and stocking is not needed.

Other management activities on the property include upland invasive species management, maintaining a split rail fence to prevent garbage dumping, trapping beaver and removing beaver dams, and posting boundaries as needed.

Adams County Remnant Fishery Areas

The Remnant Fishery Areas were purchased in the early 1980s to early 1990s with the primary purpose to provide public access to waterways and provide land recreational opportunities. Adjacent land uses to the areas include agricultural, forestland, and residential.

Fisheries management on these remnant fishery areas has consisted of trout habitat improvement projects on the Fordham Creek in 1987 (in-stream), 2001 (in-stream), 2007 (in-stream) and 2016 (brushing); on the Little Roche-A-Cri Creek in 1985 (in-stream), 1987 (in-stream), and 2013 (brushing), on Campbell Creek in 2009-2010 (in-stream) and 2016-2017 (in-stream). The purpose of brushing is to improve fishability and allow sunlight to penetrate the stream to increase production. The purpose of the in-stream habitat work was to provide a wider diversity of habitat and cover with the creation of undercut banks with overhead structure, pools, riffles and addition of logs and boulders. Improved trout habitat's goal is to increase production of trout, both in terms of increased numbers and increased size of trout.



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Annual fish surveys take place of Fordham Creek at trend stations and occur on the other streams every 12 years. Fordham Creek is unique in that it is the only stream in Adams County with brown, brook, and rainbow trout populations that are all naturally reproducing. Stocking does not occur. Adult brown trout relative abundance ranges from 300 to 621 fish per mile with an average of 420 per mile. Adult brook trout relative abundance ranges from 120 to 281 fish per mile with an average of 202 per mile. Adult rainbow trout relative abundance ranges from 76 to 353 fish per mile with an average of 173 per mile.

Other management activities on Fordham Creek remnant properties include maintaining gates to prevent vehicle access at multiple locations, upland invasive species management, and posting boundaries. Additional management on the other areas is posting boundaries as needed.

C. Current forest types, size classes and successional stages

Upper Neenah Creek Fishery Area

The Upper Neenah Creek Fishery Area is a 376 acre property. 55% of the property (199 acres) is forested while the remaining 162 acres (45%) is a mixture of grasses, lowland brush, and other non-woody vegetation.

Forest Type	Acres	Percentage of Forested Acres
Oak	176	88%
Bottomland Hardwoods	14	7%
Red Pine	9	5%

Oak Stands

Pole Stands- These areas are maturing, middle aged stands with a mix of white and black oak. Other species present include red maple, white pine, and aspen. These oak stands provide good cover and act as a food source providing hard mast for wildlife species throughout the year. Amur Cork Tree as well as Japanese Barberry are present in some of the oak stands on the property and will be removed via mechanical and chemical treatment.

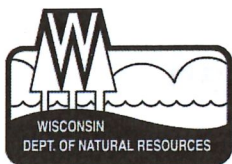
Saw Timber Stands- These stands are over mature and are rapidly declining. Many of the large black oak and some of the white oak have died and have fallen over. Some large white pines are also mixed in with the over mature oak and act as a seed source to add diversity to the next generation as the forest regenerates. Amur Cork tree and Japanese Barberry are also present in this stand.

Bottomland Hardwood Stands

Pole Stands – Maturing forest stands composed of ash, maple, birch, and oak. These stands are commonly found in flood plains and act to protect the stream bank. Tree quality can vary greatly in these stands due to the variable moisture patterns and stress related to common high water periods. Some Japanese Barberry is present here as well.

Red Pine Stands

Pole Stands- The property has 9 acres of red pine plantation that is currently pole sized. Access to manage the plantation is difficult due to being located between two streams. The plantation is believed to have been planted in the early 1990's and is currently seeing some mortality that is common in stands that are over stocked due to over competition.



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Adams County Remnant Fishery Areas

The collection of Remnant Fishery Area Properties totals 376 acres where 84% is forested and the remaining 16% is made of up lowland brush and open water.

Forest Type	Acres	Percentage of Forested Acres
Oak	190	60%
Swamp Hardwoods	46	15%
Jack Pine	44	14%
Red Pine	37	12%

Oak Stands

Pole Stands- Black oak, white oak, jack pine, aspen, and red maple are present in these stands. Stand quality is generally low due to the poor sandy soils associated with Adams County. As these stands mature some of the aspen and jack pine will begin to fall out due to being out competed by the oak and red maple.

Saw Timber Stands- These mature to over-mature stands are primarily black oak with some large white oak being included as well. Oak wilt is common in these areas as many of the large black oaks are declining, or have blown over already. Oak and pine seedlings and saplings are common in areas where ample sun light is reaching the ground. Oak stands contain small amounts of honeysuckle in the understory.

Swamp Hardwoods

Pole Stands- Ash, maple, and elms are found in the swamp hardwoods stands of the property. Swamp hardwoods stands vary significantly in quality based on the flooding variability of these low wet areas around creeks and streams. Swamp hardwood species are commonly long lived trees that help to protect and stabilize the soil near stream banks and other wet areas.

Jack Pine Stands

Pole Stands-Oak and red pine are also present in lesser numbers in the jack pine stands found on these properties. These stands are natural in origin and provide great dense cover for wildlife species. Jack pine are early successional species and are often harvested in a manner that mimics a large natural disturbance of a forest fire or other stand replacing natural event.

Red Pine Stands

Pole Stands- Most of the red pine plantations on the properties are around 50 years of age with varying amounts of regeneration underneath the overstory. Some of these pole stands have regeneration ranging from 2 feet tall to 15 feet tall that are persisting in areas where light makes it through the canopy of the overstory. Quality of these red pine stands are average to above average with many large healthy crowns and good growth rates.

D. NHI: Endangered, threatened, Special Concern species, Species of Greatest Conservation Need (SGCN):

There is one federally and state endangered bird, one federally and state threatened mammal, a state endangered herptile and plant, a state threatened fish and herptile and several federal and state species of concern identified within the general vicinity of the properties. Negative impacts to these species will be avoided by following DNR's Species Guidance Documents:

<http://dnr.wi.gov/topic/EndangeredResources/guidance.asp>. In cases where guidance documents haven't yet been developed, avoidance to rare species will occur via practices



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such as time of year restrictions, modified harvest boundaries, and/or consultation with rare species experts.

E. Wildlife Action Plan Conservation Opportunity Areas (COA):

These properties do not fall into any conservation Opportunity Areas as designated by the Wildlife Action Plan.

F. Significant cultural or archeological features:

Archeological sites are located on both the Upper Neenah Creek FA and Adams County Remnant FAs. Prior to any management activity at these locations, consultation shall occur between property management and/or forestry staff and the Department Archeologist. The outcomes of these consultations will be discussed at annual Integrated Property Management Meetings.

G. Invasive species:

Upper Neenah Creek Fishery Area

Invasive species that have been found on the Upper Neenah Creek Fishery Area include garlic mustard, Japanese hops, Japanese barberry, and cork tree. The garlic mustard was discovered in 2014 and has been treated by hand pulling and use of approved herbicides. Annual treatment will occur in the spring. Japanese hops were discovered in the fall of 2015 and was treated with appropriate herbicides in the spring of 2016. The Japanese hops will continue to be treated with chemical treatments until eradicated. Cork tree and Japanese barberry were discovered in the fall of 2016 and will be treated with implementation of a timber sale using appropriate techniques for eradication.

Adams County Fishery Remnant Areas

Garlic mustard was found on the Fordham Creek Remnant Area in 2013 by the public. The garlic mustard has been treated annually with hand pulling and in 2016 appropriate herbicides were used. Hand pulling and herbicides will continue to be used annually to control the spread of garlic mustard and try to eradicate it from the area. Japanese barberry was found and treated in 2016 with herbicides and will continue to be treated as needed.

H. Existing State Natural Areas (SNA) designations/natural community types limited in the landscape:

There are no State Natural Areas located on these properties.

I. Primary public uses (recreation)

Upper Neenah Creek Fishery Area & Adams County Fishery Remnant Areas

These areas provide trout fishing opportunities to the public along with various other outdoor recreational opportunities. Neenah Creek provides a brown trout fishery; Fordham Creek provides a brook, brown and rainbow trout fishery; Little Roche a Cri Creek provides predominantly a brook and brown trout fishery; and Risk Creek provides a brook trout fishery. Trout habitat improvement work has occurred on Fordham and Neenah Creeks with



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additional work planned in 2020 on Fordham Creek. Fisheries Management continues to acquire streambank easement on Fordham Creek to provide anglers access opportunities, protect the streambank, and allow for additional trout habitat projects. The public uses the properties to primarily hunt for deer, small mammals, waterfowl, and ruffed grouse. Trapping for beaver and muskrat do occur. Public users also enjoy hiking, bird watching, photography, snow shoeing, and much more.

J. Biotic Inventory Status:

None as of March 2017.

K. Deferral/consultation area designations:

No proposed sites as of March 2017.

IFMP components

Management Objectives for Both Properties:

These properties are managed with the primary goal of protecting the water quality and the quality of the fishery. Wildlife habitat management is also a main consideration since recreational use for hunting and fishing are fairly high on all of the parcels. Timber harvesting and management will be utilized to improve both the health of the stream as well as the quality of habitat for wildlife.

Specific Forest Management Objectives

- Conduct commercial and non-commercial cuts to encourage forest health and growing vigor
- Identify rare and endangered species and protect or enhance habitat
- Use timber harvesting methods to meet nesting, shelter, and feeding habitat needs
- Identify invasive species and implement processes to minimize or eradicate them from the properties

Property Prescriptions

Oak Forests- Manage oak forests utilizing even aged harvesting processes to mimic natural disturbances. Encourage regeneration of white oak especially due to its resistance to oak wilt and additional wildlife benefits. Natural oak regeneration must be released when the over story shows signs of decline. Oak management is an active process that requires a commitment to continually establish new oak seedlings and actively promote forest health.



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Swamp Hardwoods and Bottomland Hardwoods- Management of these two cover types will be very similar in that much of this area will not be harvested due to their proximity to the stream bank.

Some harvesting may occur further away from the stream to encourage long-lived species such as oak and maple. Remaining elm populations will be naturally maintained, and ash tree populations will be monitored as emerald ash borer is spreading across the state. Swamp hardwood and bottomland hardwood cover types will be encouraged and maintained along the stream bank due to their ability to protect the sensitive soils from erosion and runoff issues from the upland areas.

Red Pine Forests- Continue utilizing thinning operations in the red pine plantations where value can be gained and current forest health allows. Areas where the red pine overstory is negatively affecting advanced regeneration on the ground will be harvested with an overstory removal type harvest to allow the natural red and white pine seedlings underneath to grow. Artificial regeneration is unlikely on these properties due to the abundance of natural regeneration and the added wildlife benefit that natural regeneration provides. Artificial regeneration could be considered for forest health or other unforeseen reasons at a later date.

Jack Pine Forests- Jack pine stands will be harvested when the trees are approximately 50 -55 year old. Jack pines are early successional species and benefit from clear cut type harvests where ample sunlight is allowed to the ground. Thick, young jack pine stands provide great bedding and nesting habitat for many species and will be encouraged and maintained through appropriate harvesting methods.

All Stands

- Utilize BMP's for Water Quality to protect streams and wetlands when conducting timber sales
- Utilize BMP's for Invasive Species to limit the introduction and spread of invasive species when conducting forest management activities
- Utilize some form of green tree retention in all stands
- Follow DNR's Species Guidance Documents to protect rare species

Summary of Public Involvement and Comments Received

Maps

- Property Boundary Maps
 - Aerial Maps
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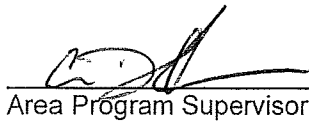
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Approvals:


Property Manager

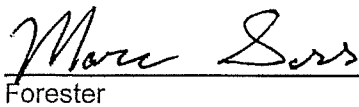
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Date


Area Program Supervisor

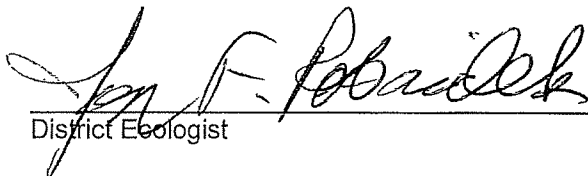
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Forester

5-9-17

Date

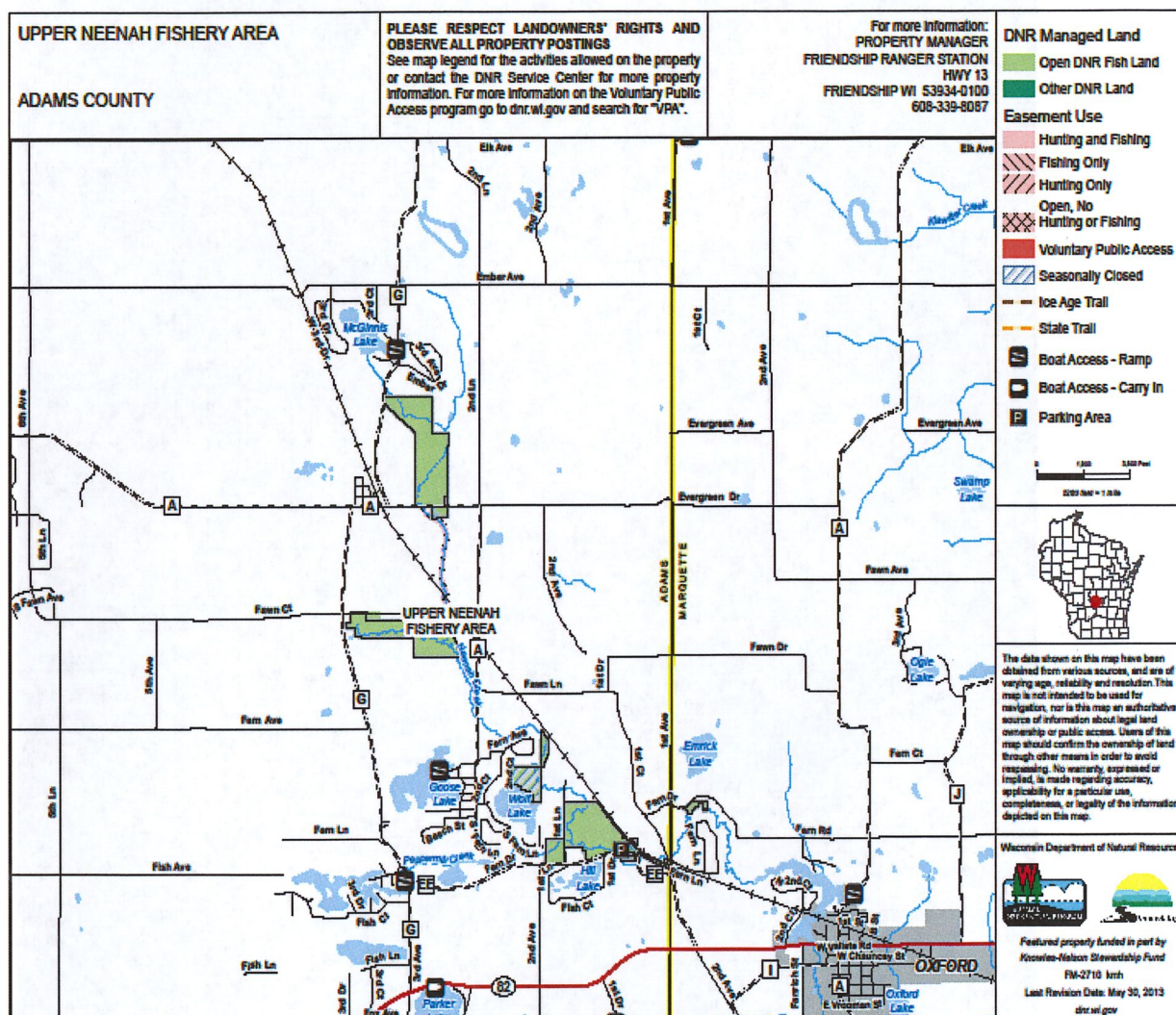

District Ecologist

5-9-17

Date

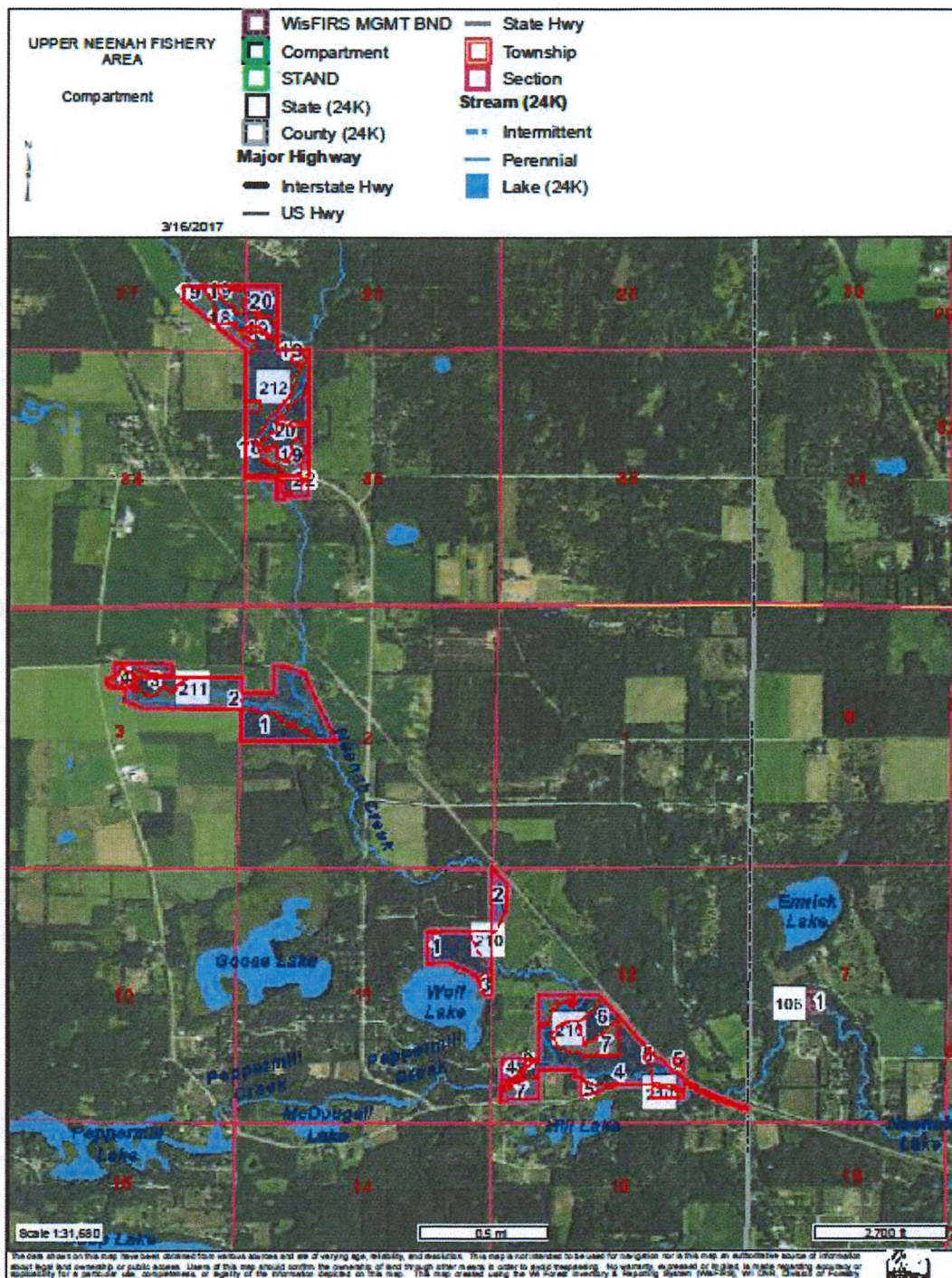


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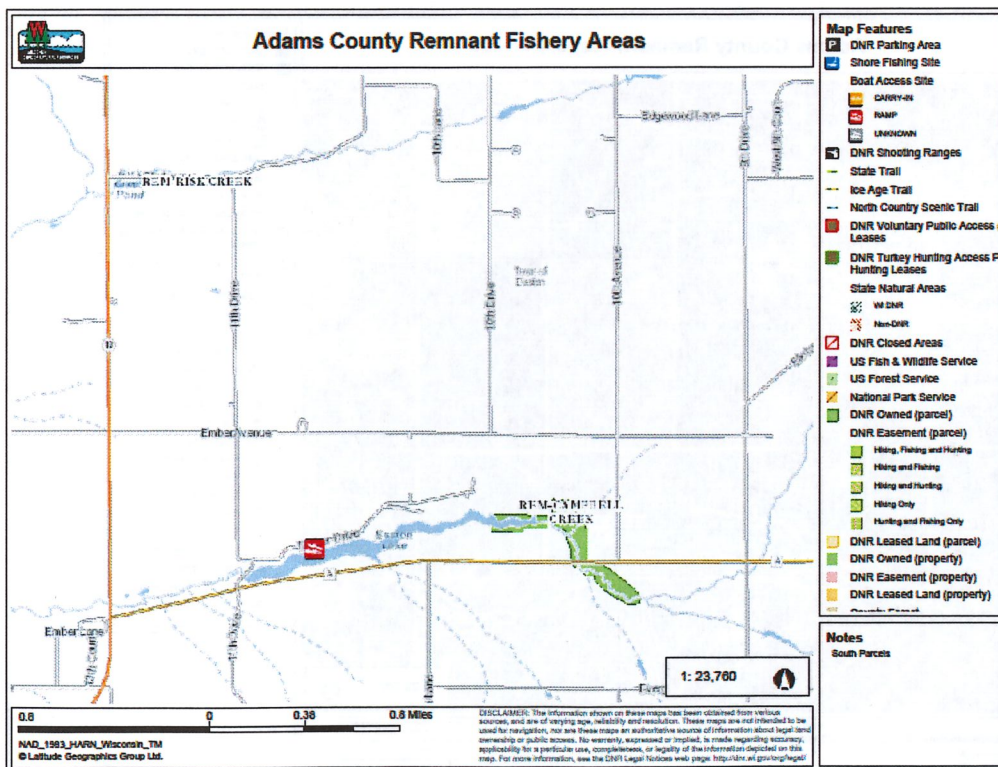
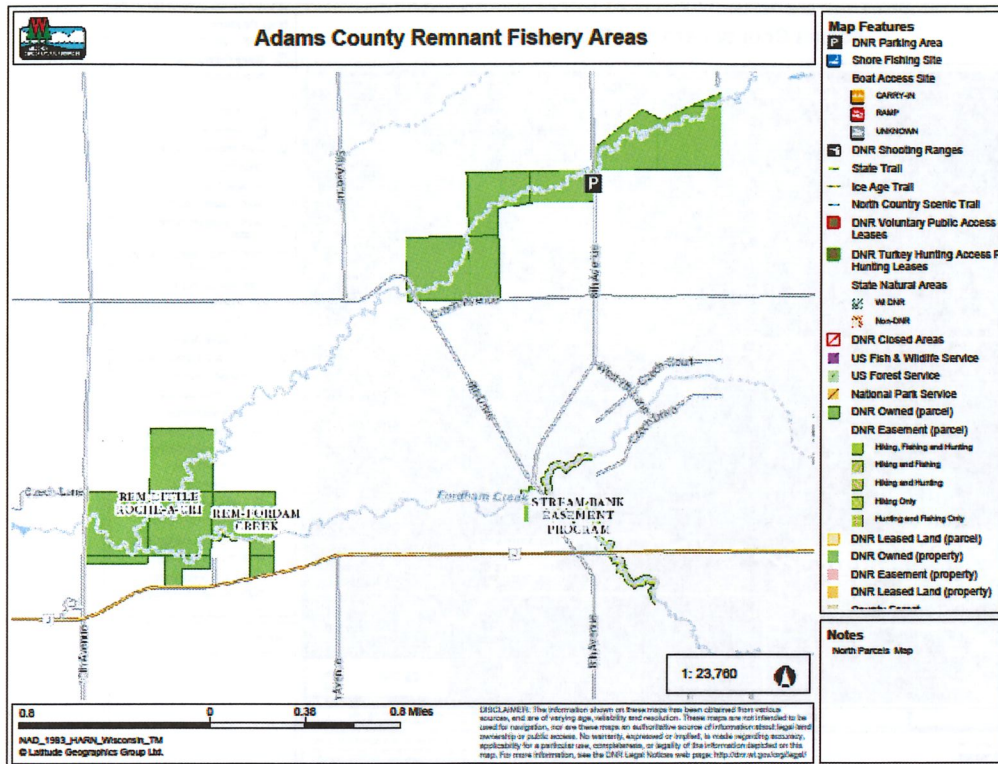


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